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6 AGRICULTURE RESEARCH COLLABORATIONS AROUND NORTH AMERICA’S CROP WILD RELATIVES AND WILD UTILIZED PLANTS
Learn about the road map being developed for collaborative action regarding our continent’s crop wild relatives and how you can help.

10 FRESH IDEAS: REFLECTING ON INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY
Our Association is committed to increasing these values throughout the public garden world. We want you and your garden to join in our dialogue!

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Connect. Protect. Champion.

Those are the three main guiding principles of your Association. It’s what you find if you click on “WHAT WE DO” on the Association’s website.

This issue features several examples of how we “Connect” people and gardens:

• one hundred professionals came together in Iowa for a symposium celebrating Crop Diversity—a result of a connection between your Association, another professional society, a federal grant, and private support—that will provide yields for years to follow;
• Japanese Public Gardens as important points of contact and connection for their communities;
• small gardens across the Northwest came together in the Garden Conservancy Northwest Network;
• the Association formed the Association’s Inclusion, Diversity, Equity, and Accessibility (IDEA) committee, which found origins in a packed room at the 2017 Conference in Hamilton, Ontario—where Association Board Vice-President MaryLynn Mack called it “the most wonderful connection.”

Those are just a few examples of how your Association facilitates connections of garden professionals. Every day, the Association’s 21 different Professional Communities provide our members with the opportunity to connect and collaborate.

If you’re not a member of a Community, take a moment to login to the Association website and you’ll be taken to our new Member Dashboard—a compilation of resources, events, news, and other information curated by Association staff and presented based upon Community membership. Click “see all” on the Communities and find ones that best represent your interests.

Make Connections!

Best regards,

RAD

Richard A. Doran
Colin K. Khoury, Stephanie L. Greene, Sarada Krishnan, Allison J. Miller, and Tara Moreau

North America harbors a rich flora of wild relatives of significant agricultural and horticultural crops, including wild apples (*Malus*), beans (*Phaseolus*), blueberries and cranberries (*Vaccinium*), chile peppers (*Capsicum*), corn (*Zea* and *Tripsacum*), cotton (*Gossypium*), grapes (*Vitis*), hops (*Humulus*), onions (*Allium*), pumpkins (*Cucurbita*), sunflowers (*Helianthus*), and many more. The region is also home to a diversity of wild utilized plants still harvested and used by people, such as sugar maple (*Acer saccharum*) and wild rice (*Zizania palustris*).

Alongside direct uses for human nutrition and their cultural importance, these plants offer valuable traits for plant breeding, including pest and disease resistance, and tolerance to climatic stresses. For these reasons, it’s worrisome that the natural habitats of many North American crop wild relative and wild utilized plant populations are degraded or disappearing, and most species lack sufficient representation in botanical gardens, public genebanks, and other *ex situ* repositories.

A shared road map for conservation, use, and public engagement around North America’s crop wild relatives and wild utilized plants was developed as part of Celebrating Crop Diversity: Connecting Agriculture, Public Gardens and Science, a USDA - NIFA, US Botanic Garden, Leichtag Foundation, and World Food Prize Foundation project.
sponsored project run jointly by the Alliance of Crop, Soil, and Environmental Science Societies (ACSESS) and the American Public Gardens Association. The road map was refined and improved with input from a wide range of botanical and agricultural researchers, land managers, and educators, both through online surveys and during in-person stakeholder consultations at the World Food Prize Foundation in Des Moines, Iowa, April 2-4, 2019. We discuss the key points from the road map below.

1. UNDERSTAND AND DOCUMENT NORTH AMERICA’S CROP WILD RELATIVES AND WILD UTILIZED PLANTS, ASSESS THREATS TO THEIR NATURAL HABITATS, AND DETERMINE GAPS IN THEIR CONSERVATION.

Species inventories and conservation assessments have been generated for various taxa and for some geographic regions in North America, but many land management areas have no comprehensive species lists. For many species, assessments are either out of date or have not yet been performed. Assessments are needed to further document and define the highest priority species across North America, understand spatial patterns with regard to their genetic diversity, analyze threats to populations, and identify the most important gaps in conservation. Results should be integrated into relevant information platforms used by the conservation, land management, genetic resource, and agricultural research communities, and these platforms should more easily align. The information and priorities must be shared widely with professionals in the conservation, land management, agricultural science, and outreach communities, as well as with the public.

2. PROTECT NORTH AMERICA’S CROP WILD RELATIVES AND WILD UTILIZED PLANTS IN THEIR NATURAL HABITATS.

North America’s open spaces, whether public, private, military, or Indigenous and First People’s conserve numerous crop wild relative and wild utilized plant populations collaterally, because of overall land protection practices. These plants are not explicitly prioritized except in a few exceptional cases, e.g., for some chile pepper, cranberry, and maize wild relative populations. Most species are not currently sufficiently conserved in their natural habitats. Conservation sites covering populations of the highest priority and/or most threatened crop wild relatives and wild utilized plants need to be designated in existing protected areas, and additional protected areas might need to be considered, to adequately protect the genetic diversity of these plants in their natural habitats so they can continue to evolve. To do so, priorities for species conservation will need to be expanded beyond those few currently officially listed as threatened and endangered.
3. COLLECT AND CONSERVE NORTH AMERICA’S PRIORITIZED CROP WILD RELATIVES AND WILD UTILIZED PLANTS IN EX SITU COLLECTIONS.

*Ex situ* collections of important crop wild relatives and wild utilized plants are maintained in botanic gardens and public genebanks across North America, but these collections are not complete with regard to coverage of taxa, nor of genetic diversity within species. Prioritized crop wild relatives and wild utilized plants across North America need further collecting for *ex situ* conservation. This will require coordination by botanic, taxonomic, and conservation experts, capitalizing on local botanical expertise, while hopefully also providing much needed training and educational opportunities for additional participants. Further research is needed to develop techniques for maintaining species that currently require expensive, non-standard approaches.

4. MAKE NORTH AMERICA’S CROP WILD RELATIVES AND WILD UTILIZED PLANTS ACCESSIBLE AND ATTRACTIVE TO PLANT BREEDERS, RESEARCHERS, AND EDUCATORS.

North America’s botanical gardens, public genebanks, and open spaces provide the foundation for making crop wild relatives and wild utilized plants accessible for research and education. These plants need to be carefully managed to ensure adequate, high quality, true-to-type propagules are available for distribution, and they need to be easily accessible via online databases. Indigenous, traditional, and local knowledge about these plants must be valued and protected through access provided by agreements based on mutually agreed terms. These plants should also be accessible to the public through botanic garden displays and through information initiatives on public lands.

View from the 2,826-acre Wild Chile Botanical Area located in the Rock Corral Canyon subwatershed of the Coronado National Forest in southern Arizona. Established in 1999 to protect and provide opportunities to research the wild progenitor (*Capsicum annuum* var. *glabriusculum*) of the most important chile pepper crop species, the Wild Chile Botanical Area was the first special botanical area in the United States designated for crop wild relative protection.

Photo: Colin Khoury
5. RAISE PUBLIC AWARENESS ABOUT NORTH AMERICA’S CROP WILD RELATIVES AND WILD UTILIZED PLANTS.

Creating coordinated educational and communications programs to help raise awareness and provide a backdrop for support of crop wild relative and wild utilized plant conservation is necessary to the long-term viability of conservation and plant breeding efforts. Skilled education and outreach professionals should lead collaborative efforts to raise awareness about the importance of, and threats to, North American crop wild relatives and wild utilized plants.

These five priorities are interdependent and require collaborative, coordinated efforts. Current initiatives that combine the efforts of land managers, researchers, and other organizations for the conservation and use of wild cranberries, chile peppers, and other crop wild relatives are demonstrating the value of collaborative approaches. Through partnerships, significant further progress can be made in conserving, using, and engaging the public with North American crop wild relatives and wild utilized plants.

Acknowledgments

We thank ACSESS and the American Public Garden Association for their facilitation of a collaborative platform to discuss synergies across North American agricultural and botanical organizations, supported by USDA NIFA (grant 2017-67019-26289), the U.S. Botanic Garden, the Leichtag Foundation, and the World Food Prize Foundation. For further information or to connect with current road map efforts, please contact the authors.

A full version of the road map published in *Crop Science* is available in the web extra:


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Tracy Qiu, doctoral student and former committee member, sits down with MaryLynn Mack to reflect on the journey of the American Public Gardens Association’s Committee for Inclusion, Diversity, Equity, and Accessibility (IDEA).

Tracy Qiu: Welcome MaryLynn, thank you for joining me. We’ve come a long way since the beginning of the IDEA committee, almost three years ago.

MaryLynn Mack: Thank you, Tracy. I’m thrilled that you and I have continued the work we’re doing, and we’re back together talking about the journey. I was thinking back to that first phone call (laughing). You have people from all over the United States and Canada on one call, but six minutes in I realized we all have different definitions of the word “diversity.”

TQ: I think that alone took two committee meetings to hammer out!

MM: On the one hand it was like herding cats, but on the other hand it was great to understand that there was so much we didn’t know about diversity, equity, and inclusion. We were all learning together.

TQ: Yes, and it was great to see how the “we” in all this learning grew, from those first committee meetings to the open forum...
session [during the Association’s 2017 annual conference] in Hamilton.

MM: The committee had the most wonderful connection in Canada at that conference. I remember that tiny little room: eight o’clock in the morning on a Friday after the reception. The room was packed, we had to keep bringing in more chairs. It was one of the most authentic and organic experiences that I’d ever had at a conference. It was then hard to figure out what to do a year later in L.A., but in the words of Brian Vogt, Denver Botanic Garden’s CEO, we continued the dialogue and “did it joyfully,” and the interest continued to grow.

TQ: And this year, the whole theme was around diversity! I’m told there were 647 people at the IDEA Café lunch. What were your hopes and dreams for that session?

MM: The goal was that people could hear something on the stage—a story, a shared experience—that resonated with them. I hope the takeaway reflection was: “What is my story? And am I listening to others? Listening to them with not just an open mind but with a mindset of: How can I be an advocate, or an ally? How can I enact change in my own landscape?”

TQ: With the success of this year’s conference, what do you think the next steps will be for the IDEA committee?

MM: Well, one of the IDEA committee goals is looking at ways we can thread inclusion and diversity into future conferences to keep the dialogue moving. The committee is also looking at ways to deliver opportunities and access for the greater membership. How do we take these robust resources, these great sessions and presentations, and make them available to everyone in the public garden world? And lastly, we’re committed to being reflective and critical of ourselves, so that we can be relevant and engaged with conversations about IDEA.

TQ: And how does your position as incoming Association board vice-president play into this?

MM: I really feel that our Association board is “walking the walk.” I’m the incoming vice president, but more importantly, Brian Vogt, as the president of the board, also sits on the IDEA committee: that alone shows the degree of importance the board has placed on this work.

TQ: With these changes, do you see a shift in the kind of questions and conversations you’re having with members?

MM: One of my realizations was that this isn’t a new topic for anyone, anymore. I think our work has explained what IDEA is and why it’s important. However, one of the overriding points I heard was that people are still searching for that manual that tells them how to be inclusive and diverse. Instead, what was delivered at the conference were tools to reflect. So we, the committee, keep turning it back, as we all should: inwards. One can be given a manual, but until a person or institution does reflective work about their own power, privilege, and biases, a manual will be just that: steps to take but no real progress.

TQ: Absolutely, especially with a topic that can be uncomfortable to delve into. For every conversation we have about the beauty of social diversity, the benefits of inclusion, the importance of access, we also have to talk about the larger systemic issues and historical contexts that make these conversations necessary in the first place.

MM: I think it is difficult. It is challenging and multifaceted. I like to be respectful of the fact that we’re all at different points on this journey, and lead from a point of sharing knowledge, as I can always learn from somebody else. People ask me: “What can I do, as a white male, or as an able-bodied person, as someone with privilege?” You showed up. You’re in the room, you were listening, and you’re asking questions and opening yourself up to discomfort and dialogue. That speaks to someone who can be an advocate to move the dial forward, because guess what, you’re leading. You’ve got privilege. You may have
power where I might not. You can create platforms for voices that might not get heard on their own. That’s exciting to me and if we’re willing to work together, then I think that’s when change truly happens. Openly, vulnerably, and joyfully.

The American Public Gardens Association’s Inclusion, Diversity, Equity, and Accessibility (IDEA) Committee is dedicated to finding, evaluating, and creating diversity resources for the Association through an equitable, diverse, accessible, and inclusive culture where the contributions of all community members are valued, respected, and appreciated. Current committee members and their institutions are listed in the side bar. To learn more about the IDEA committee, including nomination processes, resources on IDEA, and the Public Garden Sustainability Index, please visit www.publicgardens.org/about-us/IDEA.

INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY (IDEA) COMMITTEE

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BRIAN VOGT—CEO, Denver Botanic Gardens
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EVE RICKENBAKER—Herbarium Manager/Doctoral Student, University of Washington
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DURON CHAVIS—Community Engagement Coordinator, Lewis Ginter Botanical Garden
ALI KANE—Executive and Advancement Assistant, Tower Hill Botanic Garden
MAE LIN PLUMMER—Fellow, Longwood Gardens Fellows Program
"Go outside and play!" It’s a familiar directive heard by kids who were raised before the advent of computer games, 400-plus television channels, and hand-held devices. Outdoor play helped many of us use our imaginations, learn to be independent, take risks, and develop a love for the natural world. We spent hours exploring, building forts, and observing nature up close. Time spent playing outside nurtured a lifelong love of nature, an appreciation for conservation, and more than a few careers in the sciences.

The idea for a playhouse exhibition was inspired by our own childhood memories. Working with the local chapter of the American Institute for Architects (AIA) and the local contractors’ association, the Garden sent out a request for designs. Garden staff really did not know who would respond or what to expect. We were impressed by the proposals we received, and ultimately selected six different playhouse designs for inclusion in the exhibition. Then the real transformation began with pruning, weed whipping, and mulching. Finally, the playhouses were delivered and assembled by the design-build teams, the sites were mulched, and the signs were installed. Now we just needed to add Garden visitors!

During the exhibit’s first two weeks, Garden visitation increased by 53% compared to the same period in 2018. The number of children in the Garden has also doubled since 2018, and teen visitation has increased by 40%.

The play-oriented focus of the Garden Casitas project is entirely intentional. By creating a setting where children can discover nature’s gifts and pleasures in an informal, outdoor setting, we hope to set the stage for the next set of experiences. Garden Casitas is an invitation for children and families to spend unstructured time just playing in a natural setting, helping to build their comfort level in exploring spaces that feel a little more wild.

Flannery Hill is the Communications Manager at Santa Barbara Botanic Garden.
MIG, a garden design firm, recently worked on two projects, Hakone Estate and Gardens and Port Defiance Park Japanese Garden. They balanced:

- Connecting to community
- Restoring the legacy of historic gardens, buildings, and structures
- Expanding interpretive and educational opportunities
- Enhancing visitor experiences
- Improving visitor services and amenities
- Providing adequate space for staff
- Creating ecologically and economically sustainable organizations and gardens

The vision of Hakone Estate and Gardens served as the foundation for its master planning process and describes what the site aspires to do:

\[
\text{AS A LIVING EMBODIMENT OF JAPANESE GARDEN PRINCIPLES, ROOTED IN THE CALIFORNIA LANDSCAPE, HAKONE GARDENS WELCOMES ITS COMMUNITY AS A HAVEN FOR REFLECTION, REJUVENATION, AND CULTURAL EXCHANGE.}
\]

The master plan delineates specific places where the vision comes to life. Visitors move along a path marked by gates, fences, paving materials, plantings, and gardens suggestive of calm, stillness, and elegant simplicity. Natural and made elements present a shifting focus that dynamically unfolds in a repeated rhythm of gaze, focus, perception, and release.

GLOBAL VIEW
NURTURING CULTURAL EXCHANGE THROUGH JAPANESE AMERICAN GARDENS

Beth Kaminsky and Joanna Schorr

PUBLIC GARDENS OFFER AREAS CONducIVE TO CONTEMPLATION AND REJUVENATION, PLACES FOR INDIVIDUALS TO STROLL, MEDITATE, FIND RESPITE, AND ACHIEVE CALM IN A BUSTLING WORLD. AS CROSS-CULTURAL SITES FIRMLY ROOTED IN JAPANESE TRADITIONS AND SET IN AMERICAN CITIES AND NEIGHBORHOODS, JAPANESE AMERICAN PUBLIC GARDENS ALSO OFFER POINTS OF CONTACT AND CONNECTION. THEY ENCOURAGE INTERACTION, HEALING, AND PEACE IN THEIR COMMUNITIES.

JAPANESE GARDENS HAVE A SPECIAL SIGNIFICANCE IN MODERN AMERICAN HISTORY, AND THEMES OF WELLNESS AND REFLECTION RESONATE STRONGLY IN GARDENS THAT SERVE PACIFIC RIM COMMUNITIES.
The path leads to a natural experience that reveals the beauty, harmony, and asymmetry of nature.

The influence of Hakone Estate and Gardens extends beyond its site. Hakone helps maintain a decades-old Sister City relationship between Saratoga, California, and Muko, Japan, promoting events and hosting joint trips and student exchanges. The Gardens also signed the first ever Sister Garden Affiliation Agreement with the Northern Culture Museum and Garden in Niigata, Japan in 2011. Through mutual support for restoration and beautification of both sites, the Agreement helps ensure organizational stability while enhancing international understanding of Japanese gardens.

At the **Point Defiance Park Japanese Garden**, the process of incorporating traditional design principles into the master plan also took place through a Sister City partnership—between Tacoma, Washington, and Kitakyushu, Japan. A delegation of Park staff and Sister City liaisons traveled to Japan, funded by a grant from the Japanese Foundation through Sister City International. Working with Kitakyushu city staff and master garden designers from the Kitakyushu Greenery Association, the team created a preliminary landscape design.

The process then incorporated local community input. Park staff and MIG presented several design options for public comment. Based on feedback and additional work, a preferred design option was prepared.

Japanese American public gardens celebrate peace and nurture cultural exchange. They stand as powerful examples of how sites can bring people together, promote wellness, and positively impact their communities. Hakone Estate and Gardens and Point Defiance Park Japanese Garden illustrate how public spaces continually grow and evolve, adapting as visitor needs, conservation practices, and interpretive approaches shift. They also show how traditional stories and significant relationships maintain a strong sense of place.

**Artist’s renderings**

*Left: Hakone Estate and Gardens*  
*Right: Point Defiance Park Japanese Garden*

Beth Kaminsky, an interpretive writer and content developer, is a consultant to MIG.

Johanna Schorr is Principal and Director of Architecture at MIG, Inc. She was the first architecture student to study at Kobe University through its Sister City relationship with Seattle.
Established to preserve and protect native azaleas, the National Native Azalea Collection Garden acts as a conservation reservoir for hereditary material for each of the 16 North American native azalea species, and exhibits hybrids and cultivated varieties. Eleven of these species are found within 100 miles of The North Carolina Arboretum’s location. All seed is collected from documented wild origins. Although none of the species is listed as threatened or endangered, habitat for these plants continues to be lost to development. Protecting the biodiversity of native azaleas is of vital importance to the Arboretum. The site includes native stands of *Rhododendron arborescens* and *R. calendulaceum* and encompasses various habitats including rocky slopes, rich bottomland, wet drainage channels, and riparian sites. Peak flowering times are early- to mid–May with sporadic flowering in April and autumn. Flower colors range from orange to yellow, red, pink and white. Two azaleas are aromatic – *Rhododendron arborescens* and *R. viscosum*.  *Rhododendron periclymenoides*, pinxterbloom azalea (pictured here), is mildly fragrant, blooming just as the leaves unfold. The flowers are quite dramatic with pink petals and pink stamen surrounding a long pink pistil that sweeps upward out of the petal whorl.

CLARA A. CURTIS
SENIOR DIRECTOR FOR MISSION DELIVERY
THE NORTH CAROLINA ARBORETUM
THE NATIONALLY ACCREDITED NATIVE AZALEA COLLECTION
AT THE NORTH CAROLINA ARBORETUM
Tony Aiello and Ben Stormes

Maples are instantly recognizable plants that may invoke memories of playing “helicopter” with their winged samara fruit as children, visiting landscapes awash with their striking displays of fall color, tapping trees for maple syrup, or admiring their architectural grace in a serene garden setting. The genus Acer, commonly known as the maples, is a large and diverse group of woody plants represented by an estimated 238 naturally occurring taxa spread across the northern hemisphere. Throughout their native range maples inhabit diverse habitats, from flooded lowlands to scorched Mediterranean slopes, with growth habits varying from large-stature trees to moderate understory shrubs. Given the broad habitat range coupled with diversity of size and form, there is a maple for every garden. As a result, maples have long been popular horticultural plants, with an astonishing number of named cultivars being selected over centuries of cultivation.

Abundant horticultural selections coupled with diverse natural habiting preferences means no single garden could collect Acer comprehensively. Thus, the Plant Collections Network Nationally Accredited Multisite Acer Collection™ was formed in 2009 to bring together gardens with robust maple holdings to work collaboratively in stewarding their collections. The group set out four major goals during its formation: facilitate communication and collaboration among institutions with strong Acer collections; aid conservation of Acer through cultivation, propagation, and exchange of germplasm; promote and elevate proper curation and documentation; and reach consensus on taxonomic and nomenclatural issues. The group continues to use these goals in guiding collaborative work.

Initially consisting of eleven member gardens, the Nationally Accredited Multisite Acer Collection™ has grown to include thirteen members from the United States and Canada. Each institution brings unique strengths to the group, from the extensive cultivar collections of Cornell Botanic Gardens or University of Washington Botanic Gardens, to the strong species focus of The Arnold Arboretum of Harvard University or The University...
of British Columbia Botanical Garden. The United States National Arboretum is the most recent member to join the group, gaining full accreditation in 2019. The U.S. National Arboretum brings a long history of Acer collection development, having led horticultural introductions and trials within the genus as well as participating in numerous collecting expeditions to gather Acer germplasm from the wild.

All participants of the Network’s Acer Curatorial Group contribute regularly to a collective inventory, a comprehensive list of all living specimens held across the thirteen participating institutions. The 2019 combined inventory shows an impressive 4,500 living accessions, with 917 distinct taxa. Collectively, these holdings represent approximately 64% of all naturally occurring Acer taxa, many of which are rare in their natural habitats or the horticultural trade, oftentimes both. This combined inventory data has been used to inform and support various project work such as the development of the Acer Conservation Consortium supported by BGCI, as well as a portion of a thesis by Dan Crowley at The University of Reading addressing prioritization of Acer species and populations for ex situ conservation based on gap analysis in global Acer holdings.

A member garden’s strengths may not be exclusively tied to its living collections. The preserved collections housed in herbaria, research capacity in laboratories, or propagation facilities maintained by a member garden may be vitally important assets to ongoing project work of everyone in the group.

Additionally, considerable support for group goals may be leveraged through the institutional networks of member gardens, such as their involvement in the North America-China Plant Exploration Consortium, the Maple Society, or the International Dendrology Society. Last, but certainly not least, staff expertise brought to the group is invaluable. Together, the group’s membership represents decades (centuries?) of collective experience and knowledge shared with one another, and with outside organizations. Drawing on this pool of leadership and expertise, representatives of the Acer Curatorial Group share the responsibility of coordinating project work and leading the group via Chair or Co-Chair roles similar to the Association’s Professional Communities.

While adored for many virtues, Acer taxa are not without their vices. Recent observations of Acer palmatum establishing in forested areas surrounding some multisite member gardens has resulted in a study led by staff at the Morris Arboretum of the University of Pennsylvania examining seed set on various A. palmatum cultivars as a factor contributing to the invasive potential of this plant. The goal of the project is to develop a list of popular cultivars that produce fewer viable seeds, a list that can then be used to promote lower-risk selections to the nursery and landscape industries. Eight additional Nationally Accredited Acer Multisite Collection™ gardens recently contributed to the study, primarily by documenting the seed production in their living collections of a standard list of cultivars that was provided. Though this study will require...
continued work to reach its goal, these early observations are important steps in helping mitigate potential future problems.

Shifting from the historic paradigm of pride in hoarding a singular rarity, a newer philosophy has emerged that can be best summed up as “share the rare.” Maples, though, do pose some challenges to acting upon this philosophy. Seed set is sporadic in many species, with some producing copious crops of sterile samaras quite regularly. Couple this with difficulties in asexual propagation, such as graft incompatibility for some exceptionally rare taxa, and the Acer Curatorial Group members have their work cut out for them. Projects focused on propagation protocols for high-value taxa have been ongoing, and efforts to streamline the process for sharing important germplasm between member gardens remain a high priority. Progress on these fronts ensures the Acer Curatorial Group safeguards against local or regional disasters that may threaten their living collections.

While a specific species may be reasonably plentiful in gardens, genetic diversity among these plants is not always a given. Acer griseum, the familiar and much loved paperbark maple, was first introduced in horticulture via seeds collected by E.H. Wilson in 1901, with a second collection of just two seedlings for the Arnold Arboretum in 1907. It is unlikely that other introductions were made until seed was collected in 1994 during a North America-China Plant Exploration Consortium trip. As a result, it is suspected that the vast majority of cultivated paperbark maples can be traced back to Wilson’s 1901 seed collection. A team of Nationally Accredited Acer Multisite Collection™ members, led by the Morris Arboretum of the University of Pennsylvania, is conducting research to better understand the genetic diversity of A. griseum present in historic garden collections as well as in the wild, work that is especially important as this beloved species is endangered in its native range.

The Plant Collections Network Nationally Accredited Acer Multisite Collection™ serves as an example of how working collaboratively to support the common goals of upholding curatorial excellence, safeguarding plant biodiversity, and fostering knowledge sharing can bring tremendous benefit to all. Through this work we hope maples of all sorts will continue to enrich our lives with memories of playing with maple keys as children, inspire us during autumn walks though colorful maple forests, and nurture the curious collector of this exciting group of plants.

Tony Aiello is the The Gayle E. Maloney Curator and Director of Horticulture at the Morris Arboretum of the University of Pennsylvania. A co-chair of the Acer Curatorial Group, he may be reached at aiello@upenn.edu.

Ben Stormes is the Curator and Horticulturist at the University of British Columbia Botanical Garden. He is also the Acer Curatorial Group’s co-chair. He may be reached at ben.stormes@ubc.ca.
The latest issue of Public Garden is on your desk, and as you leaf through, you have an idea for an article. You aren’t a writer, you say? We are here to help get your submission into print!

Whether this is your first time or you are an old hand, here are a few tips for writing an engaging article for professional colleagues in the world of public gardens. If it’s your first time and you want to dip your toe in the water, send us a 50-word submission for “Things We Love This Season” (page 27). Do you have a worthy colleague we should know about? Consider writing a profile for “Garden Professional Spotlight.” Do you have a great idea for a feature that shares novel ideas and how-to for you colleagues? Send us a brief description of your idea (max. 300 words); you all have so much to share!

- Share useful tips, big ideas, lessons learned, and resources. Public Garden magazine is a forum for sharing ideas that can be put to use by your public garden colleagues, not simply a showcase for your totally cool project, no matter how wonderful it is.
- Make it sexy – forget the essay-style presentation you may have learned in school, and make it engaging!
- Keep it simple and easy to read; big words and long sentences and paragraphs lose readers.
- Your first paragraph is the most important if you want readers to read until the end. The first sentence should be intriguing and make it impossible for the curious reader to stop.
- Write it on a computer, print a hard copy, and read it out loud. You will be surprised at the edits that now become obvious. Repetitions of the same word or phrase, places that need a comma, and other grammatical considerations will become evident as you hear your words spoken.
- Ask a few colleagues to give you feedback – before you send it to us. It will still go through three iterations with our editors on its way to a final version.
- As it is for a rhinoceros, a thick skin is essential for writers. Our edits and suggestions are intended to draw in your reader and to strengthen your article. We are here to help!

Writing for Public Garden is a terrific way to hone your professional skills.

For feedback from past authors go to http://bit.ly/PGAuthors

Frédérique Lavoipierre is a member of the Editorial Advisory Group and an author of many articles in California-based magazines.
On a rainy fall day in Portland, Oregon, cars begin to fill the parking lot of Lake Oswego Heritage house. Hunched against the dreary weather, bodies obscured by raincoats hurry into the building. As hoods are thrown back, smiles spread across faces and “How are you?” echoes across the vestibule as old friends re-connect. Claiming seats in the conference room, hands are shaken, new introductions made, and then attention turns to the front of the room as they are welcomed to the workshop on succession planning in public gardens hosted by the Garden Conservancy Northwest Network (GCNN).

This network was formed in 2001, inspired by another public garden network, San Francisco’s Bay Area Garden Network (BAGNet). Seeing how this alliance benefitted gardens in San Francisco, it seemed natural to create something similar with garden organizations in the Pacific Northwest. As a member of the American Public Gardens Association, the Garden Conservancy believes in the importance of networking and learning from colleagues from other organizations who are grappling with the same challenges and striving toward similar goals. In its effort to preserve gardens and increase public awareness of the important role gardens play in America’s cultural and natural heritage, the Conservancy invited like-minded public garden staff and leaders in the region to Lakewold Garden where a meeting of the minds created what is now the GCNN.

The GCNN is a member-supported association of 26 public gardens and horticultural organizations in Oregon, Washington, and British Columbia including Gaiety Hollow in Salem, Oregon, Yakima Area Arboretum in Yakima, Washington, and Milner Gardens and Woodland in Qualicum Beach, British Columbia. Guided by a volunteer steering committee, the network provides professional training, promotes member organizations’ gardens and educational programs, and builds awareness of gardens in the region as vital cultural resources.

Each year two one-day-long workshops provide professional training for the staff, board members, and volunteers of member organizations. Fees are kept low through fundraising for program support, and locations alternate between Washington and Oregon to encourage participation. Each workshop is organized collaboratively by the GCNN coordinator and the host organization. Formats vary and may include presentations of case studies, panel discussions, and breakout sessions affording opportunities for discussion and networking. In addition, each workshop includes a garden tour and general meeting. Attendees complete surveys prior to the workshop, enabling organizers and speakers to tailor each session to the needs of the participants. Recent topics include educational programming for children, garden succession planning, and collections policies.

The group’s shared wealth of knowledge helps GCNN member organizations grow and develop. Participants can put what they have learned during workshops into practice in their respective organizations, as well as build upon the relationships they have developed. Director Benjamin Streissguth of the Streissguth Gardens commented, “Ten years
ago as we were expanding our reach as a public garden, we joined the GCNN for networking. Since then we’ve learned tons through the focused workshops targeted at our specific gardens and formed bonds with many of the other members. Now we know many of the staff members and have visited most of the member gardens, we are thrilled to be able to recommend them to our visitors.”

In order to maximize member organizations’ outreach, the GCNN coordinates collaborative marketing efforts like the association website www.northwestgardens.org designed to serve travelers who want to learn about regional public gardens and horticultural events. Rack cards printed annually and distributed by member organizations provide information encouraging visitation. The GCNN has also experimented with creating a garden passport. These marketing tools promote member organizations and their educational offerings, as well as create a greater awareness of the many public gardens in the Pacific Northwest. Member organizations also collaborate with one another on educational programming, reciprocal membership, volunteer benefits, and fundraising tours.

Colleen Addams-Schuppe, director of the Yakima Area Arboretum, feels that the arboretum has been able to increase its visibility through membership in the GCNN. She says, “We have broadened our reach in our region and west of the Cascades being members of the GCNN. We have found the rack cards particularly useful, giving away many each year to visitors and members. The GCNN member gardens are increasingly on people’s radar.”

Questions about the GCNN structure, process, and/or membership may be directed to Tanya DeMarsh-Dodson, former GCNN coordinator, tdodson@gardenconservancy.org or Lori Taylor, GCNN coordinator, ltaylor@gardenconservancy.org. For more information, visit www.northwestgardens.org.
Jardin botanique de Montréal (JBM) experienced the polar vortex that gripped much of North America in mid-January of this year. Nearly 8 inches (20 cm) of snow fell, temperatures remained around 5°F (-15 °C), while sustained 45 mph (72 km/h) winds produced a chill of -23.8 °F (-33 °C). With such frigid temperatures, our heating system was unable to maintain our internal temperature set points while simultaneously running the roof melt conduits for our greenhouses. Therefore, roof conduit use was abandoned to divert energy to our main heating system so the set points could be maintained. It was a risky call. The result was a 4 inch (10 cm) layer of ice over our glass structures. Several days of chilling conditions passed before we were able to utilize the roof conduits again and melt the ice. Thankfully, our structures held strong during this event and no major damage was reported.

With 88 years of experience in cultivating temperate and tropical plants in a northern climate, the JBM has grown to operate approximately 3.7 acres (1.5 hectares) of greenhouses including ten display greenhouses of nearly an acre (0.4 ha) and a network of conservation and production spaces as well as research greenhouses for the Institut de recherche en biologie végétale de l’Université de Montréal. Our greenhouse living collections comprise 12,000 different species, cultivars, and varieties ranging from orchids, begonias/gesneriads, tropical food plants, cacti, and ferns to bonsai and penjing.

These greenhouses are heated by an extensive hot water system with several hundreds of feet of piping and tunnels spanning our complex. Many of these heating pipes wrap around our greenhouse foundations, and some pass directly under production benches. In 2008, our original steam boilers were replaced with four hydronic boilers powered by natural gas to optimize energy efficiency. Two boilers can fulfill our cold season heating needs on a full-time basis, while the other two serve as built-in redundancy in the event of a breakdown. But for
technical reasons we cannot bring three, much less four, on-line at once, which is why we were forced to take the roof conduit off-line for this emergency. We also have a series of portable convection heaters that run on propane should our heating system fail. Fortunately, the last time we had to rely on portable heating occurred in 1998.

In addition to our base heating system, an overhead heating system warms the roof to prevent snow and ice from accumulating on our glass structures. We also utilize thermal curtains in the majority of our production, conservation, and research greenhouses. Our thermal curtains control daytime temperatures, ensure energy saving at night, and also provide fire suppression.

It’s important to have protocols in place to respond efficiently to short-term issues. When possible, on-site surveillance assures the most rapid response in the face of problems.

A horticulture team of thirty-five staff care for our collections. That includes two greenhouse watchpersons who rotate weekly to provide on-site surveillance from 1:00 to 10:00 nightly, all year round. They ensure that temperature values remain stable and intervene when necessary. They also conduct routine maintenance and small repairs.

Almost as many HVAC technicians, electricians, plumbers, and carpenters handle the maintenance of our highly specialized infrastructure. In the cold weather months, our dedicated in-house HVAC technicians work on a three-shift rotation to watch, maintain, and repair our climate control systems 24/7.

In addition, managers also take turns remaining on-call, outside work hours, in the event of an emergency. Emergency contact lists are posted throughout our workspaces. We hold quarterly Joint Health and Safety Committee meetings to establish safe working procedures, including prevention of risk. Monthly staff meetings keep team members informed of potential risks, useful tools, and clear procedures.

In recent years we have noticed periods of colder temperatures, more intense snowstorms, and greater precipitation reminding us that we must adapt. Additionally, we have observed that periods of freezing rain with ice accumulation are on the rise. We will be documenting these weather trends, along with studying the feasibility of switching to cleaner energy sources and more efficient technology. These results will guide us in a significant infrastructure improvement capital works project slated for the early 2020s.

We strongly suggest that other gardens plan for the changing climate. Consider having staff in-house 24/7 to handle weather-related emergencies. If that’s not feasible, then configure systems so that someone is alerted as soon as an emergency arises and develop a detailed action plan. This will ensure that corrective actions can be taken as soon as possible. Upgrade systems to meet the new challenges facing public gardens. With proper procedures and infrastructure in place, your collections under glass can continue to grow and prosper.

Meagan Hanna is the Living Collections Supervisor—Greenhouses at Jardin botanique de Montréal, Espace pour la vie.
TELL US ABOUT YOUR JOURNEY IN THE GARDEN INDUSTRY.
Gardening found me six years ago. All of my career I’ve been in non-profits, but I had little appreciation of horticulture. At the time, I was working for a church and serving as the executive director of a local food bank. My emphasis was to build community and provide food to those in need. I was asked by the board to create a community vegetable garden. Begrudgingly and with almost no knowledge I went to work. As I began to improve the soil, something inside of me clicked. I discovered a joy unlike any that I had ever experienced. Soon I was completely obsessed. We transformed a desolate plot into a full-fledged two-acre food forest. My heart’s desire to impact others had found a new outlet, by means of connecting people to nature! I began to dream of a full-time career in gardening, I just had no clue of the path. In 2017, it was time for me to move on from my work at the church and food bank. I stumbled on an internet ad for an open garden director position at PowellsWood. I applied and the rest is history.

TELL US ABOUT A RECENT PROJECT YOU WORKED ON.
When I began working at PowellsWood, I started taking photos of the garden with my phone and posting them to Instagram because I wanted the rest of the world to know how beautiful the plants were. We had about 60 followers. I was surprised to find the high level of interest that these photos generated. One day Monte Powell, our owner, came into the garden and handed me his Nikon. My photography improved drastically and now we have 8,600 followers on Instagram. I have discovered that there is a universal connection between people and plants. Our role is simply to celebrate it.
WHAT DO YOU FIND TO BE THE MOST REWARDING THING ABOUT WORKING IN THIS INDUSTRY?
I have felt so embraced and welcomed by the public garden community. Coming into a new career field I was quite intimidated. I questioned if this was the right career choice for me but once I started networking with other public gardens and meeting the outstanding souls who operate them, I knew that I had found a home. Just recently, I attended the Association’s annual conference and met countless people who listened to my story and offered their wisdom. I left feeling encouraged, embraced, and supported. The Association and other regional networks have given me great hope for the future of public gardens.

Interview by Ian Simpkins, Deputy Director for Horticulture & Urban Agriculture, at Vizcaya Museum and Gardens

RED CHOKEBERRY ARONIA ARBUTIFOLIA
A versatile shrub, capable of growing in wet soils to dry soils, it is hard to pick a season where this shrub does not shine. Radiant white flowers in spring, fire engine red berries in the summer and finally, intense shades of red and purple foliage in the fall.

Uli Lorimer, Director of Horticulture, Native Plant Trust
Photo: Dan Jaffee, Courtesy of Native Plant Trust

In Vacant to Vibrant, Sandra Albro offers practical insights to creating networks of green infrastructure on vacant lots, drawn from her experience at Holden Forests & Gardens leading projects in Cleveland, Ohio; Buffalo, New York; and Gary, Indiana. Discover new approaches to creating and facilitating more equitable access to green space.

Find the book here: islandpress.org/books/vacant-vibrant

Cait Anastis, Editor, Forests & Gardens Magazine, Holden Forests & Gardens
FINANCIAL REPORT 2019
Delivering on the Promise

TO OUR MEMBERS

As your Association’s Board President, I am pleased to share with you the first portion of our two-part annual report – key financial highlights from FY19.

Your Association finds itself in robust financial health. We were able this year to take member services to new levels. New discussion groups and community communication formats, specialty communications tailored to your interests, and an expansion of our best practices programs in plant collections and plant protection have enhanced the value of membership 365 days a year. We also held several professional development symposia and observed record-setting attendance at our outstanding 2018 Annual Conference in Southern California.

We made these investments to expand upon what we provide our members. To safeguard against economic uncertainty, we also grew our operating reserves to their highest levels ever. We continued to grow and strengthen relationships with the grantors with whom we partner to help fund our core programs. We also endured higher than ever Annual Conference expenses, and the longest government shutdown in U.S. history that delayed planned grant reimbursements for months as we ended the fiscal year. Thus, we sustained a slight loss for the year. However, it’s also a harbinger of an outstanding year to come!

We look forward to continuing to invest in you, our members, as we continue to connect, protect, and champion all of you.

Brian Vogt
President, Board of Directors

THE AMERICAN PUBLIC GARDENS ASSOCIATION’S IRS FORM 990 AND AUDITED FINANCIAL STATEMENTS ARE AVAILABLE AT PUBLICGARDENS.ORG/ABOUT-US/WHO-WE-ARE/GOVERNANCE/ASSOCIATION-FINANCIAL-DATA

THE AMERICAN PUBLIC GARDENS ASSOCIATION HAS A 2019 PLATINUM SEAL OF TRANSPARENCY FROM GUIDESTAR. READ MORE AT: WWW.GUIDESTAR.ORG/PROFILE/23-7110058

THE AMERICAN PUBLIC GARDENS ASSOCIATION HAS A 3 STAR RATING FROM CHARITY NAVIGATOR. WWW.CHARITYNAVIGATOR.ORG
INCOME AND EXPENSES FISCAL YEAR ENDING FEBRUARY 28, 2019:

FY19 INCOME: $2,387,004

- 12% Contributed Income: $296,584
- 34% Membership Dues: $812,515
- 4% Investment & Other Income: $84,711
- 29% Earned Income: $683,441
- 21% Government Support: $509,753

FY19 EXPENSES: $2,633,917

- 26% General & Administrative $684,564
- 1% Fundraising $37,729
- 73% Program Services $1,911,624

FIVE-YEAR COMPARATIVE INCOME & EXPENSE

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INVESTING IN OUR MEMBERS

A fundamental aspect of your Association’s strategic plan is to deliver high quality programs, resources, and services for our members.

Investments were made in FY19 for projects that were realized in FY20:

- Expanded array of professional development events and resources, including improved presentation formats:
  - Monthly Specialty Newsletters delivered directly to our members’ inboxes
  - Member Dashboard, launched in September 2019, puts resources within easy reach on the Association website
- The Garden Board Member Experience debuted at the 2019 Conference, providing Board members an opportunity to learn and share effective oversight practices at member gardens;
- A new strategic planning process was initiated, charting the course of the Association for the next five years.

We remain committed to providing our members with the services they have come to expect from us and to anticipating their needs as we continue to grow our organizational capacity.

OUR ANNUAL MEMBERSHIP REPORT, WITH KEY METRICS FOR MEMBER ENGAGEMENT AND PROFESSIONAL DEVELOPMENT, WILL APPEAR IN THE NEXT ISSUE.
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